

A Striking View Of The Plant Of
American Flours, Inc., Newton, Kan.

Grain

THE MAGAZINE OF PLANT MANAGEMENT AND OPERATION

August, 1946



By all means. **BE AN OPTIMIST!**
BUT BE PREPARED FOR THE WORST!

Look on the Bright Side—Hope for the Best. But bear in mind, you can't "Kid" yourself out of having a Dust Explosion.

You most certainly can, however, experience peace of mind and more security by *minimizing* the possibility of an explosion smashing your plant to smithereens and blowing employees into Kingdom come! How?

Simply by equipping your elevator legs with Robertson Safety Ventilators. And here's the reason . . . Robertson Safety Ventilators safeguard against explosions by continually venting Dangerous fine dust from elevator legs—where most explosions originate. No excessive dust—no explosions. That's obvious!

Play safe with Robertson Safety Ventilators. You'll have a mighty good reason for feeling comfortable when you *know positively* that explosion hazards have been *definitely* minimized.

Why not write today for descriptive literature?

H. H. ROBERTSON CO.

Farmers Bank Bldg.

Pittsburgh, Pa.

New Techniques in Sulfuring

By FRANK A. JOST, Jr., Partner, Gerstenberg & Co.

Vice President, Chicago SOGES Chapter

MOST Elevator Superintendents are familiar with the old process of bleaching various grains. Because the procedure was awkward and messy, grain bleaching has been heretofore looked upon as a nuisance, a necessary evil or something to be avoided.

In the old process, grain was admitted at the top of a tower or tank and allowed to flow down over a series of baffles or shelves to the bottom of the tower. Under the baffles steam and the products of combustion of sulfur and air were mixed and partially absorbed by the descending grain. The sulfur dioxide was obtained by burning elemental sulfur in an oven-type burner, the resulting burner gas then being blown into the tower.

At the bottom of the tower a belt or screw conveyor removed the damp, hot, saturated grain to an elevator boot or leg where it was elevated and passed into the storage bin.

Had Many Disadvantages

SUCH an apparatus has several serious disadvantages. First, it is costly to install, requiring a relatively large treating tower, a steam boiler, a sulfur burner, a combustion chamber, a fan, a variety of nozzles, diffusers, etc. The usual initial cost was in the neighborhood of \$8,000 to \$10,000 for a single tower installation.

Second, it was costly and troublesome to maintain. The extremely corrosive nature of the hot sulfur dioxide gas mixture produced a rapid attack on the nozzles, conveyors, legs and, in fact, all metal parts which came into contact or even near the treated grain.

Third, fumes were very obnoxious. Frequently, the atmosphere in an entire elevator would become almost unbreathable during the treatment.

Fourth, due to the large volume of nitrogen and unburned air in the fumes, a large tower was required for a relatively slow movement of grain. The average tower handled only 1,000 to 2,000 bushels per hour.

Fifth, the grain was usually hot as it emerged from the tower and frequently wet. Generally, there was an excess of sulfurous fumes. The grain had to be cooled by turning and frequently dried or aspirated to remove excess moisture or sulfur dioxide.

Because the process was a costly nuisance, the inevitable result was that grain bleaching came into disfavor with the elevator men.



Simple, Fast, Inexpensive Method
Developed

AS manufacturers of liquid sulfur dioxide, the Ansul Chemical Company has always been interested in processes in which sulfur is burned. Some years ago the company investigated the grain bleaching field and developed an extremely simple method of using sulfur dioxide to bleach

grain. The patented procedure is as follows:

Grain from a garner or scale is run on a belt to the tripper or leg and flows into the storage bin. The scale or garner slide is calibrated to deliver the number of bushels per hour that it is desired to treat. As this grain enters the bin, each kernel is completely coated with a mist consisting of sulfur dioxide and water from a system of atomizing spray nozzles supported in the bin opening.

The rate and degree of treatment may be readily adapted to condition and quantity of grain to be bleached. The Ansul system has successfully treated as little as 1000 bushels per hour and as much as 12,000 bushels per hour. The practical limit is determined only by the capacity of the legs and belts supplying the treater.

Can Ship Next Day; Turning Un-necessary

IT is recommended that treated grain be allowed to remain in the bin for 24 to 48 hours after such treatment. In some cases, however, grain bleached in the late afternoon has been loaded early the next morning. While there was still some odor of the bleaching agent at the time of loading, the reaction was complete and the odor gone before arrival at destination.

In this system of grain treatment it is unnecessary to turn, aspirate or cool the grain after bleaching as there is no noticeable increase in temperature during the process. In fact, the grain may be treated and left in the bin for months without further attention.

The amounts of water and sulfur dioxide used are controlled by simply setting valves so as to maintain a pre-determined pressure on the spray nozzles. The spray tips are calibrated and the exact weight of water or sulfur dioxide which they will

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TOPS IN GRAIN BELTING

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Douglas .



POLICY AND PURPOSE

When grain handlers speak of fumigants it's only natural for them to speak of "TETRA-FUME". The leadership enjoyed by this grain fumigant did not come about by chance. Thirty-one years of research and experience have gone into this product. Douglas Chemical & Supply Company have not permitted changing times or present-day conditions to influence the quality of their products. Today, as always, their one policy and purpose is to produce a fine grain fumigant at a fair price.

Efficient service is brought about by a strategic location in the heart of America and by a modern plant, equipped with the latest and finest machinery. Steady growth and progress are reflected from customers in forty-five states. As the circle of patrons continues to widen, an expression of appreciation for your confidence and good will is in order.

Full details available on fumigation problems.

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Douglas Chemical and Supply Company

1324-26 West 12th St. INCORPORATED 1916 Kansas City, Missouri

BRANCH WAREHOUSES: INDIANAPOLIS, INDIANA; SPOKANE, WASHINGTON;
MINNEAPOLIS, MINNESOTA; PORTLAND, OREGON.

deliver at any pressure in unit time has been determined. By setting a definite pressure it is possible to regulate the weight of sulfur dioxide used within 0.01 pound per bushel, and the moisture content of the grain within 0.1%.

No Lost Grain Nor Time; Little SO₂ Used

WHEN bleaching is required, it is only necessary to start the flow of grain and turn on and regulate the proper flow of sulfur dioxide and the proper flow of water. When the last bushel is treated the valves are turned off and the work is completed. No time is wasted in starting, no material lost in the operation and a minimum of labor used in the operation.

In treating oats and barley, slightly less than 0.1 pound of sulfur dioxide per bushel of grain is used on the average. Lightly stained grain will require only about 0.08 pound per bushel, while a very bad stain may use from 0.12 to 0.15 pound per bushel. The water may be regulated up to 1% or more. One percent is sufficient to give satisfactory bleaching within 24 hours.

The complete cost of treating grain by this method is less than ½c per bushel. The material cost consists only of the sulfur dioxide. This is sold in tank cars containing 40,000 lb. at 4c per lb., f.o.b. Marinette, Wisconsin, freight equalized with any nearer manufacturing source of supply. Freight will seldom exceed ½c per lb., making the delivered cost about 4½c per lb.

Estimating the sulfur dioxide used at 0.1 lb. per bushel, the material cost to the elevator is only 0.45c per bushel and ½c per bushel can be considered as a maximum. Sulfur dioxide can be supplied in ton drums and smaller cylinders at slightly higher prices.

Fire Hazard Eliminated

ANOTHER very important feature of this process is that there is no fire hazard connected with treating grain when using this company's newly developed installation, with the statement that fire insurance rates are not affected.

A summary of the advantages attendant on this Ansul system for bleaching grain is as follows:

1. Low installation cost
2. Low treatment cost
3. Perfect regulation of moisture and bleaching

4. Control of bleaching
5. Rapid treatment
6. Low curing time
7. No fire hazard
8. No rehandling
9. Uses no new chemicals
10. Easy application
11. Ready for instant operation
12. Grain can be bleached as needed

The company has assured me that they will be glad to send engineers to any of the elevators where an installation is contemplated. This grain bleaching process is covered by U. S. Patents 1,914,341 and 1,914,342. Licenses are offered thereunder to grain companies on very favorable terms.

It is anticipated that this paper will revive the hope of some of our Elevator Superintendents who feel that bleaching grain can be made a profitable venture.

COMPLIMENTS BRAND'S THINKING

I have had the opportunity of reading in the May issue of GRAIN SOGES President Herbert C. Brand's

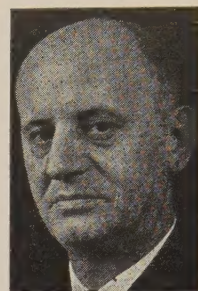
OVER HALF U. S. EXPLOSIONS ARE IN GRAIN ELEVATORS

You have probably received a copy of the 1946 edition of the National Fire Codes for the Prevention of Dust Explosions, and will note on page 188 that **THE PROPERTY LOSS IN GRAIN ELEVATOR EXPLOSIONS IN THE UNITED STATES ALONE IS MORE THAN HALF OF THE TOTAL LOSS FROM DUST EXPLOSIONS IN ALL INDUSTRIES SUBJECT TO THIS HAZARD.**—Hylton R. Brown, Chairman, Dust Explosion Hazards Committee, National Fire Protection Ass'n, College Park, Md.

Annual Report to the Superintendents' Society, entitled "My Stewardship." This excellent report contained many items of interest to me, particularly the references to the work of the Dust Explosion Hazards Committee and the references to increased dust explosion losses in grain handling plants. These increased losses have been brought to the attention of the National Fire Prevention Ass'n's proper committee, and it seems that some revisions in the present Code for the Prevention of Dust Explosions in Terminal Elevators may be desirable.

The Superintendents' Society is composed largely of operators who have first-hand knowledge of grain elevator conditions and for this reason their Secy., Dean M. Clark, was named as a member of the sub-committee which

will attempt to revise the present. The main committee will probably meet in December or January, and at that time I hope the sub-committee code. Mr. G. F. Butt of the John S. Metcalf Co., 105 S. La Salle St., Chicago 3, is chairman of the sub-committee. will have a report to present for consideration.



Herbert C. Brand
Quaker Oats Co.

All Suggestions Welcome

In the meantime the Superintendents will have an opportunity to present, through Dean Clark, any revisions or additions which they feel should be made in order to provide sound and effective recommendations for the reduction of dust explosion losses.

As indicated in President Brand's report, the grain elevator industry has been suffering the heaviest losses among industries subject to the dust explosion hazard, and I hope that it will be possible for the Superinten-

dents' Society and other groups to arouse both the owners and operators to the importance of adopting all possible precautions to prevent dust ignitions.

If any of the members of the Superintendents' Society or of the industry have any specific changes to the code to propose at this time they can be presented directly to me, as Chairman of the Dust Explosion Hazards Committee, or through Dean Clark to Mr. Butt.—Hylton R. Brown, Senior Engineer, U. S. Department of the Interior, Eastern Experiment Station, College Park, Maryland.

Poor Change

Doctors and economists both might well be puzzled by the case of the 17-month-old in Pennsylvania who swallowed a nickel and coughed up a penny.

Proper Air-Space in Spouts Prevents Damaging Beans, Etc.

Some several years ago "GRAIN" published an interesting article on spouts and linings, by John S. Bush of Kingston, Ont. At the end of that article you stated that Mr. Bush's formulae and more detailed instructions would be mailed upon request.

I am particularly interested at present in the angle discussed relative to AIR SPACE requirements, primarily because I am trying to load dry beans with less loading breakage. While I am having partial success, still I think it likely that the information asked for may be a help in improving the situation by correcting what I believe may be improper provisions for air space and in the manner of trying to use it.

We profited handsomely several years ago from another article by the same author through switching to butt joints in the spout—most generally used instead of the old lap joint installation, and are very well pleased with the change.

If the above information is still available for distribution I would certainly appreciate copies.—Super.

Here's the Answer

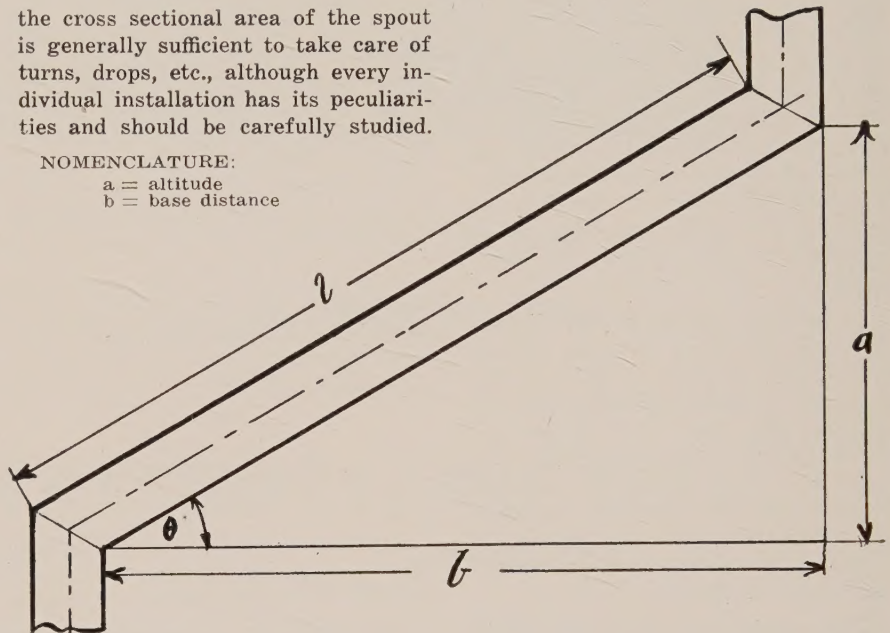
Illustrated is the requested data relative to air space in grain spouts.

With regard to the air space requirements, fifty (50%) percent of

the cross sectional area of the spout is generally sufficient to take care of turns, drops, etc., although every individual installation has its peculiarities and should be carefully studied.

NOMENCLATURE:

a = altitude
b = base distance



l = length
θ = angle of inclination

FORMULAE:

$$\tan \theta = \frac{a}{b} \text{ or } \tan \theta b = a \text{ or } \frac{a}{\tan \theta} = b$$

$$\cos \theta = \frac{b}{l} \text{ or } l = \frac{b}{\cos \theta} \text{ and } l = \frac{a}{\sin \theta}$$

$$\text{and } l = \sqrt{a^2 + b^2}$$

$$\begin{aligned} \tan 30^\circ &= .577 \\ \cos 30^\circ &= .866 \\ \sin 30^\circ &= .500 \end{aligned}$$

NOTE: The values of the tangent, cosine and sine will change with the angle

of inclination. Since the sine of 30° is ½, a spout with this inclination will always be twice the length of its altitude or 2a = l. This, however, is only true for this said angle.

BELT DRESSING ANSWER

Referring to your questions and answers on Page 16 of the December issue of GRAIN, question No. 1 asks for information on belt dressing.

After installing a new belt, a small amount of liquid belt dressing should be applied. However if the proper installation has been made and the correct size and ply belt used, it is not necessary to use a belt dressing.—David P. Swan, Field Engineer, Gruendler, Crusher & Pulverizer Co., St. Louis, Mo.

COMPLIMENT APPRECIATED

We appreciate very much your comment on our current advertisement and on the ones which have previously been published. We are trying to do a job not only for the New York Stock Exchange, but for business generally. To this end, our advertising in the future probably will be somewhat broader. Commendation such as yours gives us real encouragement.—Emil Schram, President, New York Stock Exchange.

COMMUNISTS PROMOTE POLITICAL STRIKES

Over American industry and traditional American trade unionism hangs the growing threat of political strikes primarily aimed at coercing the government—but far more effective in disrupting management-union relations. This is the warning sounded by A. C. Croft, President, National Foremen's Institute, in a special report stressing that when workers strike solely for political objectives they usually walk off their jobs in open violation of the union contract and despite the fact that their employer has no direct connection with the political question at issue.

He posed the rhetorical query, "How can an employer operate efficiently if he is likely to be struck at any moment merely because his workers do not like something that's going on in Washington?"

The threat of political strikes has already been translated into action along the Atlantic and Pacific seaboards, he pointed out. "Whether it will spread widely inland depends upon how strong the Communist elements in various left-wing CIO unions prove to be. The use of the strike for purely political purposes is basic to Communist ideology; and, since the revision of the party line last July, the Communists have focused their energies upon increasing their strength in the unions."

REDESIGN MILL MACHINERY TO CURB INSECTS

There is one point on which mill executives, operative millers and Food and Drug Administration officials are in complete agreement. All feel that flour mill machinery must be redesigned as a step toward better control of mill infestation. In present designs there are too many cracks, ledges and dead corners within their interiors where flour may accumulate and provide refuge for insects.

Most manufacturers of flour milling equipment have large and growing backlogs of unfilled orders. It will be most unfortunate if all this new equipment is of the present insect-harboring design.

Current and future purchasers of new flour mill equipment should not be content to order machines of the old shapes but should insist upon more streamlining. Mill equipment manufacturers are making satisfactory progress with their redesigning programs. They want to cooperate in the movement to rid flour mills of insect pests and are ready and willing to change over to models designed to minimize infestation if and when the demand becomes apparent.

Purchasers appear to be waiting for the manufacturers to announce new models and manufacturers are waiting for a demand to develop. Right now should be the time to break the deadlock.—Millers' National Federation.

McMILLAN HEADS COUNCIL

W. D. McMillan, Ithaca, N. Y., is the new president of the Feed Industry Council. In charge of feed research for the Co-operative Grange League Federation Exchange, Mr. McMillan succeeds F. E. Boling of Chicago as head of this fact-finding body formed in 1942 on feed supplies and needs for the industry.

An organization of manufacturers, distributors, etc., the Council includes nutritionists from state colleges and the feed industry as consultants. Annual reports on feed needs and supplies are supplemented by frequent progress reports.

A graduate of Cornell University, Mr. McMillan joined G.L.F. in 1925 and has been active in the Council since its formation. Widely known in feed circles, he is regarded as one of the country's outstanding authorities on feed needs and supplies.

Life is so complicated that a fellow would be lucky if he wasn't born at all—but that seldom happens.—Charlie McCarthy.

Why your Dow distributor is your best fumigation source

Food processors and vendors everywhere depend more and more on the *reliable* fumigant distributor.

That's because fumigation is *more* than a business. It's a technique—a way of achieving fullest protection against marauding insects and rodents which would otherwise become an unbearable problem to the entire food industry—and to the nation.

To distributors of Dow fumigants—responsible men who *know* fumigation—have come many requests for fumigation services. The reason is clear: Distributors, operators and engineers—with their own reputations

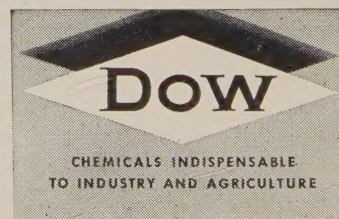
at stake on every job—have found in DOW METHYL BROMIDE, DOW CHLOROPICRIN and other Dow fumigants dependable quality which matches their own high standards of service.

Outstanding distributors and operators know that they can safely recommend Dow fumigants to their best customers because each product is designed to do the job and do it right.

No wonder fumigation customers say: "The way to get *good* fumigation is to look for the reliable supplier who offers *Dow* fumigants!"

WHEREVER RESULTS COUNT—
DEPEND ON THE FUMIGANT DEALER
WHO KNOWS!

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BARLEY'S "DAY" JUST DAWNING

Dr. John H. Parker, Director of the Midwest Barley Improvement Association, Tells The Wisconsin State Brewers Association in Milwaukee.

MALTING and brewing, like flour milling, is an ancient and honorable profession. Barley is an old crop; some authorities consider it to be the oldest of our cultivated grains. Barley is widely grown and is adapted to a wide range of environmental conditions.

According to the late H. V. Harlan of the USDA, barley fields thrive in Europe, north of the Arctic Circle, and also on the plains of India. Barley is grown on the high plateaus of Tibet. It climbs still higher up the slopes of Mount Everest.

Barley is found fringing the oases of the Sahara, or growing beneath the date trees. It is the crop that is grown highest up on the mountain peaks of Ethiopia, where pools of water are often frozen over beside the growing grain, and it is cultivated in the lower delta of the Nile, where brackish water lies 18 inches below the surface.

Man's Most Dependable Cereal

ARAB farmers are seeding barley in the dry hills of Mariout along the Mediterranean in northwestern Egypt where the rainfall is but 8 inches, just as they were in the days of Rome, and Chinese peasants are growing age-old varieties in their western hills.

Barley is cultivated by Hindus, Turks and Japanese. It is grown by Russians, Berbers and western Europeans. It is man's most dependable cereal where alkali, frost, or drought are to be encountered. It grows particularly well where the ripening season is long and cool.

Barley will stand much heat in the absence of humidity, but it does not mature so well in hot, humid weather. It grows better with moderate rather than excessive rainfall, better on well-drained lands than on water-logged, or sandy soils.

Thousands of Distinct Varieties

THERE are thousands of distinct varieties of barley. All of us are familiar with six-row and two-row barley. Most of us know that winter barley is different from spring barley in its habit of growth, although it is not always easy to distinguish the threshed grain of these two types.

The USDA maintains a living herbarium of some 4,000 types of barley, a world collection. Relatively few of these varieties have direct agricultural-industrial value, but some of them have characteristics useful to the plant breeder, such as earliness, stiff straw, disease resistance and tolerance to green bugs.

Barley is a self-pollinated crop, i.e. each kernel is formed by the fertilization of an ovary by a pollen grain from the same floret in the same head. Pollination takes place as the head is emerging or even while it is still partly in the boot, so there is little chance for cross pollination. There is more natural crossing in wheat and oats than in barley, much more in sorghum and cotton — which are rather promiscuous. Rye and corn are almost entirely cross-pollinated.

Barley varieties are rather well "fixed" in their hereditary characteristics, although sports or mutations



"Well, anyway, we got our money's worth."

do occur, occasionally. Some characters are little influenced by environment, for example, two-row vs. six-row, bearded vs. hooded, dense vs. lax heads.

Trebi, The "Sow's Ear"

THE expression of other characters is greatly influenced by environmental conditions, for example, height of plant, stiffness of straw, dates of heading and ripening, yield and quality. Even with these characters the old saying holds true, "you cannot make a silk purse out of a

sow's ear" — and Trebi barley has poor malting quality under almost any conditions of soil and climate.

The Midwest Barley Improvement Association, organized last August, came into being to meet the real need of malsters and brewers for more and better barley. Here in Wisconsin the average production of barley for the ten years—1934-1943—was 19,589,000 bu, but this year the crop is placed at only 3,534,000 bu—due to reduced acreage, not to low yield, 38 bu per acre. Similar serious reductions in barley production have taken place in other states, to wit: Minnesota, 44,401,000 (1934-43) — 14,442,000 (1945); Iowa, 8,979,000—84,000; Michigan, 5,172,000 — 4,252,000, and Illinois, 2,983,000—1,096,000 bu.

Barley production in North Dakota on the other hand has increased tremendously from the 1934-43 average of 33,000,000 bu to 57,000,000 bu this year. South Dakota also produced more barley this year, a crop of 33,000,000 bu compared with the 1934-43 average of 28,000,000.

Quality Off; Diseases Increase

IN ADDITION to this serious reduction in quantity of barley, the malting quality has suffered in some areas due to the increase in number and acreage of varieties of barley unsuitable for malting. The list of varieties not wanted by malsters and brewers includes Spartan and Sanalta, two-row types; Trebi, a rough six-row barley; Plush, a Canadian variety with hulls that split and fray badly when threshed close; Tregal, a cross between Trebi and Regal, and others. Mars is a new variety recently distributed to farmers in Minnesota by the Minnesota Agricultural Experiment Station. Whether it will be acceptable for malting has not been determined.

The seasons of '42, '43 and '44 were unfavorable for barley but favorable for barley diseases. During these three years, Wisconsin No. 38 barley lost favor with many farmers in Wisconsin, Minnesota and other states. However, it should not be forgotten that this variety yielded well and was popular and widely grown in several states for many years. There is no evidence of any genetic change in Wisconsin No. 38 barley, although

some believe that this variety is "running out." Wisconsin No. 38 staged a strong "come-back" in 1945 and yielded well in comparison with other varieties.

Factors that have operated to reduce barley production are: The increased corn acreage and high yields of hybrid corn, the very high yields of Vicland and other new rust resistant varieties of oats, government war-time subsidy of \$5.00 per acre for flax, and guaranteed high price for soybeans. Having recited these facts about the decline in barley production and some of the reasons for it, the next question is, what can we do about it?

Malsters, Brewers To Guide Selections

IT seems logical to take immediate steps to make supplies of certified seed and seed only one year removed from certification readily available for planting next spring, sorts of approved varieties that are recommended by the state agricultural colleges and that have the quality characteristics wanted by malsters and brewers including Wis. No. 38, Oderbrucker, and a few others.

It will be necessary for malsters and brewers, therefor, to advise the Midwest Barley Improvement Association what types of barley are desired and what sorts are not wanted, with reasons for these likes and dislikes. This information can then be relayed to plant breeders, agronomists, grain inspectors, elevator managers and others interested, to the end that in a few years we will have fewer and better varieties of barley coming to terminal markets, making it much easier to standardize malt and malt products.

Seed certification agencies in some states are now certifying too many varieties of barley, to wit, eight in one state. To convince seed certification officials that a change in their policy is needed, we must give them definite information on the malting quality of barley varieties, old and new, and on the crying needs of the malting and brewing industries.

Federal Grades Need Revising

THE federal grades for barley need careful study and probably need revision, giving more emphasis to *variety*. More accurate methods of determining and defining mellowness in barley are also needed. For instance, aleurone color is not a true index of texture in barley for not all white or yellow aleurone barley has good malting quality and not all blue aleurone barley has poor malting quality. In fact, Harlan and Wiebe, of the USDA claim that "the blue

color in itself is entirely harmless, being merely a pigment deposited in the outer layer of the endosperm. It has nothing to do with malting quality."

Plans are being made for some malting quality tests of new crop barley and of new varieties, to supplement the tests now being made in the Barley and Malt Laboratory at Madison.

The technical language of barley and of the malting and brewing trades needs to be translated into popular language, readily understood by all. The words, acrospire, scutellum, conversion time, aleurone, extract, alpha

and beta amylase, diastatic power, degree Lintner, clarity of wort, and other terms need interpretation and explanation for people not technically trained, but who need to understand the language of malt house superintendents, brewmasters and brewing chemists.

All Must Know Varieties

BY THESE and other means, we hope that in a few years, the whole barley public, especially farmers and grain handlers, will be more quality-conscious and *variety*-conscious than at present. To ac-



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An *efficient* dust collecting system must be engineered to the building, equipment and conditions in which it operates.

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Just like a ...DEN

Concrete, like teeth, **MUST** be inspected and attended to regularly! Cavities **MU** prepared, **cleaned** with only a technician's skill, **rebuilt** with an expert eye towards and, finally, **filled** with a truly lasting protective material; . . . bridge-work must and whenever necessary — **and the sooner the better and the cheaper it will be.**

Nature is constantly **tearing down** and so both concrete and teeth must be restored as **quickly** knows how — for once deterioration has started it increases rapidly and restoration costs jump **aw** may even reach the point where either is beyond reclaiming.

Did you ever stop to think just why you go to a dentist to have your teeth fixed? . . . "Sure" an expert and has the necessary tools, **equipment** and **experience** with which to do a **first-class** job stop to realize what would happen if you did **not** go to an expert to have your concrete repaired

We have had nearly **thirty years' experience** exclusively in the restoration and care of concrete and are busily engaged in this specialized work the year 'round. By having the proper tools and ex

of experience we are enabled to give you the **b** **expense.** If you entrust your problem to us y **satisfactory results** and the most for your money

Protect your property investment as you would h your teeth from further decay — **the best way!**

Our work is NOT cheap, — but it is lasting. The reason is the skilled man-hours involved and the quantity and quality of our materials is greater and costlier and more satisfactory. The best is the cheapest in the long run!

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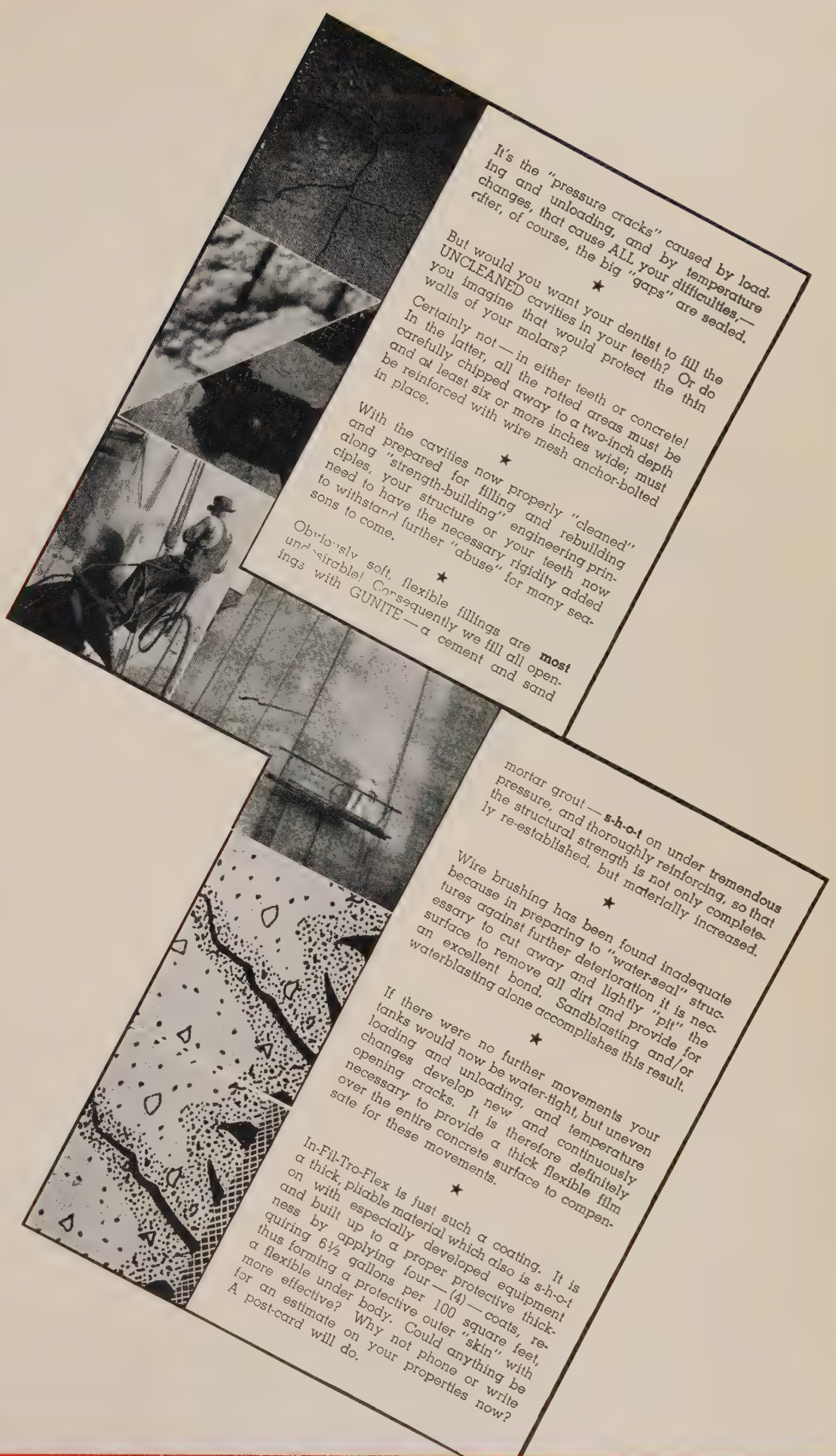
ur skilled mechanics
oment and a wealth
job and at the least
can be assured of

your Dentist protect

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It's the "pressure cracks" caused by loading and unloading, and by temperature changes, that cause ALL your difficulties, — after, of course, the big "gaps" are sealed.

★

But would you want your dentist to fill the UNCLEAVED cavities in your teeth? Or do you imagine that would protect the thin walls of your molars?

Certainly not — in either teeth or concrete! In the latter, all the rotted areas must be carefully chipped away to a two-inch depth and at least six or more inches wide; must be reinforced with wire mesh anchor-bolts in place.

★

With the cavities now properly "cleaned" and prepared for filling and rebuilding along "strength-building" engineering principles, your structure or your teeth now need to have the necessary rigidity added to withstand further "abuse" for many seasons to come.

★

Obviously soft, flexible fillings are **most** undesirable! Consequently we fill all openings with GUNITE — a cement and sand mortar grout — **s-h-o-t** on under tremendous pressure, and thoroughly reinforcing, so that the structural strength is not only completely re-established, but materially increased.

★

Wire brushing has been found inadequate because in preparing to "water-seal" structures against further deterioration it is necessary to cut away and lightly "pit" the surface to remove all dirt and provide for an excellent bond. Sandblasting and/or waterblasting alone accomplishes this result.

★

If there were no further movements your tanks would now be water-tight, but uneven loading and unloading, and temperature changes develop new and continuously opening cracks. It is therefore definitely necessary to provide a thick flexible film over the entire concrete surface to compensate for these movements.

★

In-Fil-Tro-Flex is just such a coating. It is a thick, pliable material which also is s-h-o-t on with especially developed equipment and built up to a proper protective thickness by applying four — (4) — coats, requiring 6½ gallons per 100 square feet, thus forming a protective outer "skin" with a flexible under body. Could anything be more effective? Why not phone or write for an estimate? Why not phone or write. A post-card will do.

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New York 17, N. Y. 3723 Grand Central Terminal

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Seattle 11, Wash.—Pioneer Sand & Gravel Co., Inc., 901 Fairview Ave., North; • Toronto 10, Ont., Canada—Asphalt Services, Ltd., 366 Adelaide St., West; • Fort William, Ontario —Northland Machinery Supply Co., Ltd., 203 Hardisty St.; Winnipeg, Manitoba—Northland Machinery Co., Ltd.

compish this latter, it will be necessary for all concerned to know how to identify varieties of barley, not only in the field by means of plant and head characters, but also the threshed grain by means of kernel characteristics. Consequently the Malt Research Institute, the University of Wisconsin and the USDA are coöperating in the preparation and publication of a bulletin on American barleys which will include a key for the identification of barley varieties. This will be useful to all interested.

If we succeed in making plant

breeders and agronomists more mindful of the importance of malting quality, it may be possible to get these plant scientists to agree not to select, increase, distribute or recommend any new varieties of barley that are not acceptable to maltsters and brewers, for it is not practical to use a feed barley such as Trebi, for malting.

It seems obvious that more plant breeding and agronomic research with barley are needed in the middle west. Some of the state experiment stations have well organized, well supported

programs of barley breeding and improvement. In other states, where malting barley is or could be a crop of major importance, the cerealists spend nearly all their time and effort on hybrid corn, wheat, oats and flax, with malting barley getting only minor attention. More industrial fellowships are needed in the postwar years. Past experience indicates that they will pay handsome dividends in barley as they have with corn, wheat, oats and other crops, the raw materials of the food industries.

Barley's "Day" Just Dawning

AT A RECENT conference of wheat improvement men from five states a well known flour mill executive closed his talk with this statement: "Where there is no vision the people perish". I am confident that maltsters and brewers have vision and that these industries will not perish, but progress and prosper.

RALSTON SUIT DISMISSED

The sensational suit for \$3,000,000 filed by the OPA in Federal Court in St. Louis, Mo., Aug. 29, 1944, against the Ralston Purina Co. was dismissed July 31, 1946, by OPA, after nearly two years of investigation. The suit involved alleged overcharges by the company, on one item in its line.

The suit brought immediate denials of overcharge from the company and demands from throughout the feed trade for clarification of the regulation on which the suit was based. The figure of \$3,000,000 represented the maximum penalty for such overcharges, based on treble damages, and based on the assumption that the alleged overcharge on the one item had been made on the company's entire output.

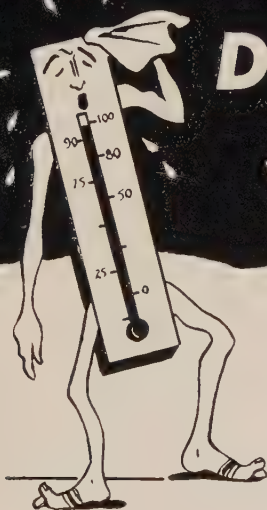
Donald Danforth, President of Ralston, expressed gratification at the outcome of the case, saying: "The dropping of the suit after two years' investigation is proof that our prices have always been within the OPA limits. Our action in defending this case at a critical time in the war period helped to clarify the price structure for the entire feed trade."

WILL CONTINUE TO BE USEFUL

GRAIN has been read with a good deal of interest by the writer and other members of our staff, and we are looking forward to receiving further issues. We feel that your publication will continue to be most useful to us, and would appreciate your entering our name on your subscription list so that we may secure all future issues. —G. C. Hunter, Canadian Underwriters' Association, Toronto.

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DON'T TRIFLE with WEEVIL



Prompt and adequate control measures *now* will protect your grain from the double-trouble of infestation and lower grade later in the year.

With the world crying for bread you can help the supply by treating your grain *now* with

Larvacide

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This powerful tear gas fumigant penetrates kernal to kill eggs and larvae life within, along with the adult insects. Toxic to all granary pests including grain mites.

LOW COST —

For weevil and other insects only \$1.50 - \$1.70 per thousand bushel in closed concrete bins.

**LESS RISK OF
ACCIDENT—**

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EASY TO APPLY—

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Looks For Good Safety Record Hereafter

By OSCAR W. OLSEN, F. H. Peavey & Co., Duluth

Chairman, SOGES Safety Committee

AS individuals we have probably all done a good deal for accident prevention during the past two years, but as a group we have accomplished few of the objectives which we out-



Oscar W. Olsen
SOGES Safety
Chairman

lined at the Chicago convention in 1944. The main reason is that we have been overly busy with the countless problems brought about by trying to operate during war time conditions, with new help and short crews.

In our committee work we were greatly handicapped because the Superintendents entered in our safety contests were so tardy about sending in their figures. In fact, we were only able to compile the list of trophy winners the week before our Cedar Rapids convention and it will be a little while before we can complete the statistics for 1944 and 1945.

While our contest winners made very good records, the sad fact remains that the balance had a lot of accidents, and our combined record is far from good.

Now that the war is over perhaps we can soon begin to make plans for accident prevention campaigns not only for our plants, but also for the industry as a whole.

Something has already been done along that line through the SOGES representatives who are on the Food Section's Executive Board of the National Safety Council. They have met several times since our last convention. When they have concrete suggestions to offer they will notify our secretary, Dean Clark. This is a hard working committee and I am glad that our Society is so well represented in their activities.

Will Expand Services

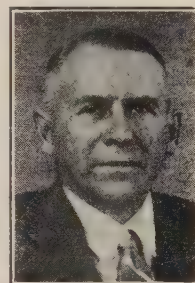
OUR own program has been more or less dormant for the reasons

outlined above, but the following matters will be given attention as soon as conditions permit:

1. "Study Course"—This has been completed and is being printed in "Grain" in several installments. A lot of hard work has gone into this and therefore we are disappointed that so few members have given us an order for the assembled data which will be issued in book form. I believe each of you can use a considerable number of these booklets, which will probably be available in a few months.

2. Beginning at the first of the year 1945, Dean Clark has been printing our "Daily Safety Reminders"—one month at a time, in "Grain." He is anxious to know what use the Superintendents are making of this material. It is suitable for a daily message on Bulletin boards, or for weekly reminders (such as pay-roll inserts), for discussion at plant safety meetings, etc. A similar set is available for 1947, in mimeographed form. They will be furnished on request as long as they last. Similar material will also be available for 1947, but probably will not be printed in "Grain" unless there is a demand that this be done, as space is limited and required for other purposes.

We also have available similar sets for truck fleets (stressing driving hazards).



Clarence Turning
Safety Contest
Director

3. I am very anxious to have an expression from the Superintendents as to a continuation of our Safety Contests. There has not been too great a response from the members to justify much enthusiasm from our own

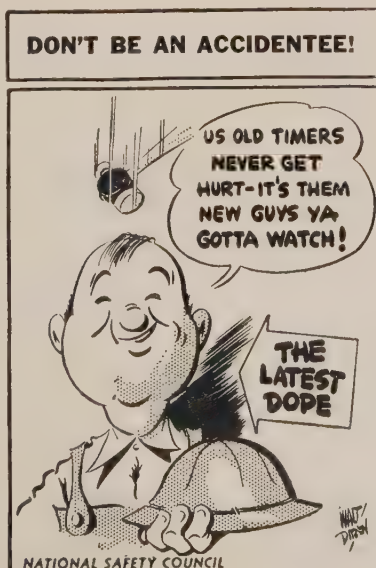
hard-working National Committee. However I believe they all feel as I do—that we should carry on with the present program if the members want it. There has not been much response to our plea for 1946 entries, but I feel that with conditions returning somewhat closer to normal that we should roll along with all our safety activities and stress particularly the Safety Contests which helps to bring out a true cross-section of our accident situation—and which we can get in no other way.

4. Let us know your needs as far as safety material is concerned. Posters, bulletins, and detailed data can be obtained for you on practically any safety or fire prevention subject.

Solicits Ideas

WE have talked about Safety for a long time. We have written all the data we have been able to obtain on our special hazards, including the Study Course. Now it is time that each one of you give us the benefit of your ideas and continue to help us in our safety activities, as your present committee members are beginning to run out of ideas.

This is not a wholly satisfactory report, but as indicated above, we will catch up on our statistics and they will be issued in full and detailed form as soon as possible. Our next report will be much more satisfactory if we can get each Superinten-



dent to contribute some item to our safety program.

All I ask at this time is an expression from you. Will you send in your ideas to me as to our future activities? Are there any other activities that should be dropped or added? Our aim is to work on safety matters not now being handled by someone else. We do not wish to duplicate efforts being made by the National Safety Council, for instance.

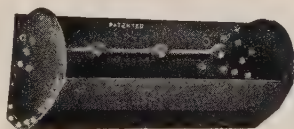
Our objective is to reduce accidents in your plants, and I still believe that we will eventually attain that objective, but it means hard work and increasing safety efforts by each of us. I know you all are interested and eager to co-operate.

EMPLOYEE-EMPLOYER RELATIONS SAFETYWISE

If employers would give more time to safety work among employees and include their families in some of the meetings, probably more progress would be made.

This improves the whole employee-employer relationship. Safety is very vital to the man himself.

This is just a suggestion. It has been worked out in some localities with good results.—W. F. Leonard.



THE FACT STILL REMAINS
that

SUPERIOR ELEVATOR CUPS

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MADE STRONGER
will

LAST LONGER
have

GREATER CAPACITY
and will operate more efficiently
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William J. Porter of Russell-Miller Milling Company, Grand Forks, N. D., is pictured as he accepts the company's First Award Plaque on behalf of the employees. "Bill," an avid SOGES booster, is Chairman of the Plant Safety Committee, which group assisted their mill from ninth place in 1943 to first spot for their classification.

Pictured, left to right, are: C. A. Olsen, Mike Wirkus, Melvin Shol, Bill Porter, Ed J. Brown, Manager John L. Ryan, Karl A. Waxvik, and Ole A. Solum.

JOB TRAINING FOR ACCIDENT PREVENTION

By H. W. Puetz, Safety Engineer

- 1.—Always have on or more of the shop employees on the Safety Committee, as well as *all* the foremen. This arrangement spreads the safety program from top to bottom.
- 2.—Never let an accident get "cold." Investigate immediately for all the facts and honestly ascertain the cause. . . . It should be charged to: inattention, poor training, lack of supervision, machine failure or employee not suited to the job.
- 3.—Every foreman should have an occasional safety talk with his employees. He may learn things otherwise not brought out and also gain the confidence of the employees.
- 4.—Safety is like a wheelbarrow, it will not go itself, you have to push it.
- 5.—Always remember, the job of the Safety Committee is to get there before the accident. Don't wait for an accident! Stop it before it gets a chance to be an accident.
- 6.—Every foreman and safety committeeman should know the rudiments of first-aid, artificial respiration, state safety codes and the use of fire fighting apparatus. In an emergency one properly trained man is worth many untrained men.

COULD BE

In many parts of Tibet foremen are
so highly regarded that they don't

have to pay taxes.

But they don't have safety engineers in Tibet.

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Single or Double Types

With or without Drives and Motors

All repair parts, any make—Hooks,
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A GOOD TOOL FOR BETTER INDUSTRIAL RELATIONS

By Leonard J. Danielson, Arcady Farms Milling Co., Chicago

The following incident tells a story of industrial relations of the right kind, so vitally needed at this time if we are to go forward successfully, with our full employment and reconversion programs, and share in the national prosperity that is within our grasp—if we will but work together.

I was talking with a man who worked in one of the war industries in a neighboring city and asked him what kind of a crowd they were to work for. He answered: "They're fine, especially the foreman in my department. He respects his men, and they know it; and you can bet we respect him!"

All Strive for It

All men desire the respect of their fellows. One cannot progress very far without it, so all of us strive in various ways to obtain that possession. . . . Some seek it by trying to impress others with their personal importance; some by hard work and by "sweeping" their way through;

others by cultivating the art of good fellowship above all else.

But there is another way, the one employed by the foreman we have mentioned, which has never been presented as a formula. One of the surest foundations on which to build for the respect of men is first to respect them. Respect what is good in them and let them feel this respect—they in turn are pretty apt to give their respect.

Seeing Virtues Pays

If it is natural for a man to approach others, seeing first the virtues (with the faults as of secondary consideration), he likely will find that men are seeing his virtues, first, and he will win from the start a favorable handicap toward winning their respect.

That Lincoln was a rail splitter was of no more lasting consequence than that he was tall instead of short—but that he knew men, and because he respected them was the big thing,

THE HONEYMOON IS ALMOST OVER

We've heard a lot (from government statisticians and others) about "enormous dammed up purchasing power." There is no such thing!

All the money savings in the nation wouldn't keep America's factories running—and Americans on payrolls—more than a few weeks. The only real purchasing power results from what a man *produces*, which he can then trade for what other men produce. That is why higher wages without higher production cheat all workers. Savings merely represent what some worker has produced and has not yet traded.

The higher the wage cost of what is produced, the higher its price has to be. By just that much *your purchasing power is reduced!*

The higher the price of what is produced, the fewer people there will be who can and will buy it. The fewer who buy it, the fewer workmen needed to make it . . . that means layoffs which sooner or later include you. And then *your purchasing power is gone.*

It is just simple arithmetic that the only way your purchasing power can be kept up is for you *and all workmen* to produce *more efficiently*. Yet how many politicians or labor leaders are honest enough with you to tell you that obvious truth?—From an advertisement of Warner & Swasey, Cleveland machine tools manufacturers.

HIGH CAPACITY GRAIN CLEANING EQUIPMENT for TERMINAL ELEVATORS!



NEW PRIORITY-RATED
EQUIPMENT AVAILABLE
FOR ESSENTIAL NEEDS

Hart-Carter normally offers a complete line of special, heavy-duty cleaners for terminal elevators. Included are the 2564 Carter Disc-Cylinder Separator, combining discs and cylinders; and the all-cylinder 45 Hart Uni-flow Grain Separator. These machines offer a profitable answer to whatever cleaning, grading, separating or processing jobs you may be called on to handle.

HART-CARTER COMPANY

670 Nineteenth Ave. N.E.

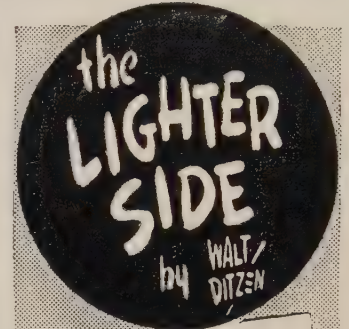
Minneapolis, Minn.

which combined with his intellect, made him the great American.

This simple personality item, so productive of peaceful industrial relations, might be put on the records.

TEMPERATURE NO HANDICAP

Wheat, barley, oats and rye are raised in areas in Russia where temperatures drop to 80° below zero.



From National Safety News
Published by
The National Safety Council

Here's the Dope

VETS' TRAINING PROGRAM

Please tell us more about the Training Program for Returned Veterans about which you wrote us in suggesting a Chapter meeting. We have not heard or read anything about this U.S.E.S. service and would appreciate your giving us a little more information pertaining to this subject before answering your question as to whether it would be a helpful suggestion for a group meeting with the Elevator Managers here.—Peyton A. Kier, Manager, National Milling Division, National Biscuit Co., Toledo.

Answer: The U.S.E.S. has offered their services in the various surplus grain growing and processing states in having a representative appear before SOGES group meetings to explain the government's program for training returned veterans in industry. Inasmuch as provisions under which this operates varies from state to state, this subject was not included in the SOGES convention program at Cedar Rapids.

The program is quite comprehensive, as well as very fair to industry. An outline of what the vet will be taught by steps before arriving at a predetermined goal is necessary, somewhat similar to brief on an educational course in school. Some of the larger processing plants within this industry have launched on this program and report the results satisfactory, other than the indecisiveness of the vet to "stick" on the job. This, however, among other important factors, will be well covered by the representatives assigned to address any group.

It might be well to ascertain beforehand whether or not the speaker will be qualified to give authoritative answers to questions, as without answers to questions much benefit would be lost.

Sounds Screwy

It's odd enough, perhaps, when a fire starts itself and then puts itself out, but when it happens twice in the same way, you begin to wonder. During the past year in both New York and Maine the sun's rays, passing through a bottle of water in a truck, set fire to the floor of each truck. But the heat of the fire broke the bottle and the water put out the flames.

HOW TO USE HANDICAPPED WORKERS

As readers know, the successful employment of handicapped veterans of both World Wars depends upon the degree to which employers are convinced that persons with minor and major physical disabilities can do productive work. To help veterans' organizations find the right job for the disabled veteran and to help business concerns employ the handicapped ex-G.I., The National Foremen's Institute has published a new book called "How to Use Handicapped Workers." The following book review presents the highlights of this valuable and popular new manual.

Written by Arthur T. Jacobs, "How to Use Handicapped Workers," is designed to aid employers, personnel officials, foremen and supervisors to make successful use of the physical, mental and temperamental abilities of ALL employees. As the author contends, many workers are "handicapped" only in the sense that they are in the wrong jobs, while others have more or less obvious physical deficiencies.

Four techniques are explained:

1. How to analyze the physical demands of a job to find out what



"I warned Junior about that Bubble Gum."

characteristics of mind and body the worker must have.

2. How to evaluate the capacities of handicapped individuals to deter-

mine what jobs they can handle best.

3. How to match the handicapped with jobs they can fill as well as the non-handicapped.

4. How to break in the handicapped on new jobs.

One important section that management will want to refer to frequently is an 80-page appendix which summarizes various physical and mental handicaps. For each type a description is given together with an evaluation of its effect on working ability, things to note in placement interviews with persons so handicapped, and medical reports that may be helpful.

A useful insert chart, 13x15 inches, summarizes the physical demands for 105 occupations covered by formal apprenticeship programs.

5¼ by 8, 181 pages, Bound in library buckram, "How to Use Handicapped Workers," by Arthur T. Jacobs. Available at \$3.50 f.o.b. shipping point—The National Foremen's Institute, Inc., Deep River, Conn.

HIGHER WAGES NOT ANSWER

Both Management and Labor must find out what each wants, in the opinion of Sam A. Lewisohn, able industrial leader. Higher, and even higher wages will not settle the human relations of Management and Labor, he points out, for many strikers are now paid the highest wages in the history of the world.

What the worker wants is not merely just wages, but just treatment, status (having their jobs recognized as important), opportunity for advancement, and security, says this savant.

Bright Future Here

A certain editor had cause to admonish his son because of his reluctance to attend school.

"You must go regularly and learn to be a great scholar," said the fond father encouragingly, "otherwise you can never be an editor, you know. What would you do, for instance, if your magazine came out full of mistakes?"

"Father," was the reply, "I'd blame them on the printer." And then the father wept for joy, because he knew he had a worthy successor for the editorial chair.

DON'T REMINISCE—THINK AHEAD

Here are some rules we recently read which were in effect in "the good old days" in 1880 at a Chicago department store:

1. Store must be open from 6 a. m. to 9 p. m., the year 'round.

2. Store must be swept; counters, shelves and showcases dusted; lamps trimmed, filled, and chimneys cleaned; pens made; doors and windows opened; a pail of water and a bucket of coal brought in before breakfast.

3. The store must not be opened on the Sabbath unless necessary, and then only for a few minutes.

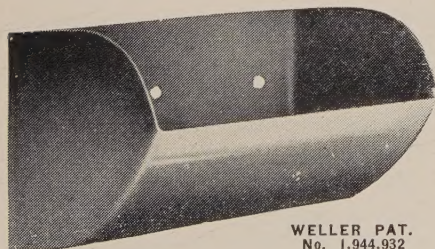
4. The employee who is in the habit of smoking Spanish cigars, being shaved at the barber's, going to dances and other places of amusement, will assuredly give his employer reason to be suspicious of his integrity and honesty.

5. Men employees are given one evening a week for courting and two if they go to a prayer meeting.

6. After fourteen hours in the store, the leisure hours should be spent for the most part reading.

WHEAT GRIND SLUMPS

During June, 1,115 mills ground 37,556,000 bu wheat compared with 36,220,000 bu ground by 1,107 mills the month before, and 53,435,000 bu ground by 1,032 mills in June of 1945.



WELLER PAT.
No. 1,944,932

"Gets in Our Hair," Too

... delayed shipments ... just as it does yours. If your order for Calumet Cups has not been delivered as promptly as you would like to have it, remember we are loaded with orders and having trouble getting steel ... doing the best we can.

To you who have waited so patiently for deliveries ... a MILLION THANKS.

CALUMET SUPER CAPACITY ELEVATOR **CUP**

B. I. WELLER CO.

327 S. La Salle St.

Chicago 4, Ill.

HOW WE GOT WHEAT

Wheat was unknown in the Western Hemisphere until the 16th century, according to one authority. Then it was accidentally introduced into Mexico by a negro slave belonging to Cortez. The slave mixed some with rice intended for planting there. It grew so well that many varieties were soon cultivated.

PORT OF CHURCHILL RE-OPENED

After a long period of inactivity, the Port of Churchill on Hudson Bay re-opened for grain shipments with the first boat arriving on Aug. 11.

First of six bottoms to load for direct shipment to overseas destinations in seven years, some 1,877,737 bu. wheat moved out during August from this 2,500,000 bu. elevator. [A few boats slipped into this port and took out about three-quarters million bushels of wheat in September of 1943 when there was urgent need for food, taking same to New York for convoyed transport.]

Between the time this terminal was completed in 1931 and the time one vessel was torpedoed in 1939 (after which shipments stopped), over 20,000,000 bu. went through the elevator.

CARLOADINGS OFF 7.4% AND 2.8%

Cumulative carloadings of grain and grain products for the first 32 weeks of the year were 7.4% under those of 1945, and 2.8% under those of 1944, according to the Association of American Railroads, and totaled 1,507,024 in 1946, 1,627,601 in 1945, and 1,549,695 in 1944.

Reflecting the active season of the industry, carloadings of late have totaled:

	1946	1945	1944
July 20.....	63,526	68,553	59,723
July 27.....	59,121	67,849	57,408
Aug. 3.....	56,392	63,651	52,299
Aug. 10.....	53,862	63,494	51,206

JULY CORN GRIND

Eleven refiners ground 8,788,419 bu corn for domestic consumption during July, according to the Corn Industries Research Foundation.

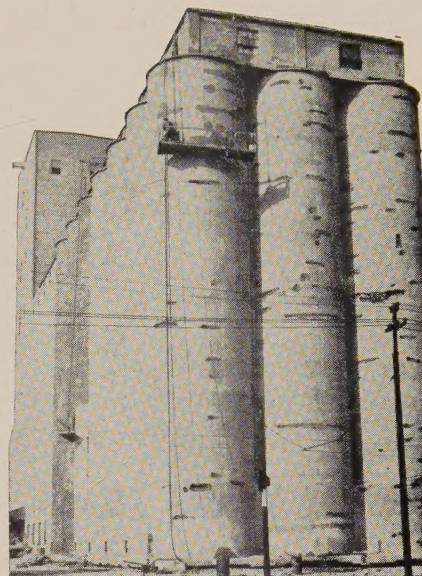
English Corn

The Englishman stopped at the farmhouse. "Pardon," he said to the farmer, "what do you do with all that corn?"

"We eat what we can and what we can't eat we can."

The Englishman looked blank, and his wife nudged him, and asked, "What did he say?"

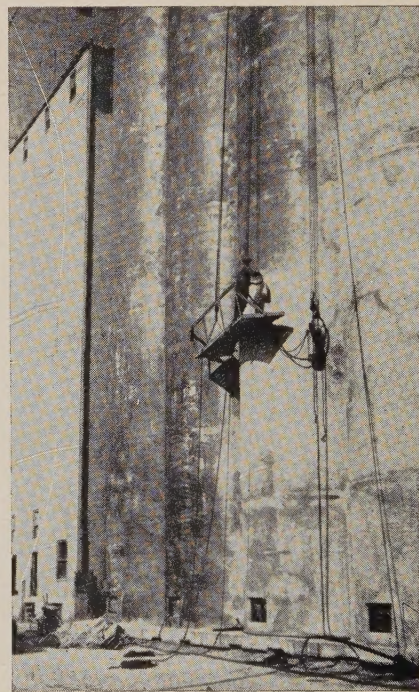
"I think he is a little off," replied the Englishman. "He said they ate what they could, and what they couldn't they could."



PLAN NOW

to give your plant a new lease on future operation before it's

TOO LATE



INSIST upon having your weatherproof work done painstakingly and expertly, as did the J. J. Badenoch Co., Chicago, whose plant is pictured above in the process of being scientifically preserved by the

JOHN D. BOLTON CO.

Specialists to the Grain Industry

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JAKE KINTZ ILL

Jake Kintz of J. C. Kintz Co., Cedar Rapids, manufacturers and suppliers of equipment and sundries for elevators, feed and flour mills, soya plants, food processors, etc., recently had a heart attack and at this writing is still in Mercy Hospital.

Jake is widely known throughout the industry and his absence from his office will be the source of regret to his many friends. His able office staff will do their best to fill the needs of his many loyal customers. His progress will be reported in these columns.

THIS MONTH'S COVER

This month's cover shows the plant of American Flours, Inc., of Newton, Kansas, of which the entire staff is justly proud.

Augmented a few years ago, the storage unit consists of 42 tanks and interstices, for a total storage of 1,700,000 bushels capacity.

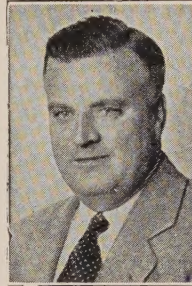
Unique is the construction of the 10,000 bushel leg which was made entirely of concrete with slip forms at the time the tanks were poured. (Slip forms were not used on the head.)

According to Everett Allen, Elevator Superintendent, a 72-inch pulley is used both in the boot and head of this leg.

TO DEDICATE MEMORIAL

One of my chief responsibilities right now is preparing a souvenir program in connection with an unveiling ceremony we shall have some time this summer in our little park in front of our main office. The park has been named "Sailors' Park," and in it we have erected a 25-ton piece of grey granite. We are having some wonderful bronze work done for it.

We lost 58 sailors in the Caribbean Sea during the war. Our little boats were hauling bauxite ore for the United States government in that area when the going was the toughest. Their shallow draft made them very suitable for navigating the shallow rivers where the bauxite ore comes from.—Percy C. Poulton, N. M. Paterson & Co., Ltd., Fort William.



SMOKER ON DEC. 14

The well-known annual "Associates' Night Smoker" of the Chicago SOGES Chapter, so widely looked forward to by everyone able to attend within a radius of 500 miles or more, has been announced for Saturday evening, December 14, in the Bungalow of the Hotel Morrison by Chapter President Lloyd Forsell of Albert Schwill & Co.

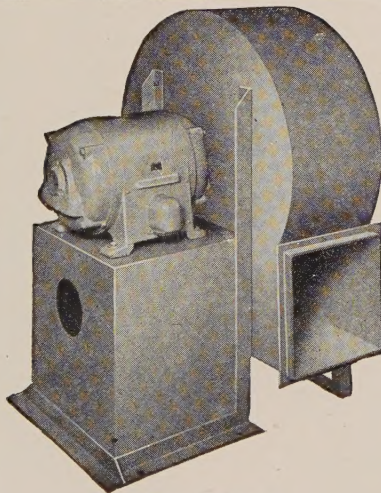
Chairman of the Associates Committee putting on this interesting evening will be Sidney Cole, Industrial Erectors, Inc. The balance of the hard working committee will include Irving Cohen, Arco Bag Co.; Charles Harbin, Underwriters Grain Assn.; Paul Naehner, B. F. Gump Co.; Harry Press, Pullman Sheet Metal Co.; Frank Butt, John S. Metcalf Co., and Harry Zimmer, Bonded Exterminators, Inc.

This well attended annual event usually includes much home-talent acting with hilarious skits embracing much of the active Chicago membership. Between 60 and 75 is the usual turn-out, with a dozen or so more from out of town, particularly from Milwaukee. Chairman Cole states: "Any of the visiting brethren are more than welcome," so mark your calendar now.

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500 LBS. WATER TO GROW 1 LB. CORN

Pointing out that it takes 500 pounds of water to grow one pound of corn and 37 gallons of water to produce one slice of bread, the Agricultural Department of the Baltimore & Ohio Railroad has just issued a new booklet on conservation designed to bring to the attention of agricultural interests the supreme importance of this subject of water conservation in our national economy.

Approved and successful methods of conservation of soil, water and forest are described in picture and story, and the principles of land conservation are covered in groupings such as balancing crop rotations, contour farming, liming program, fertilization and terracing, with helpful hints on the proper methods of working out these improvements.

While sufficient water on the farm is a blessing, surplus water can be a menace—yet can be made to contribute to the improvement of the land the proper drainage and the development of sod waterways.

Other subjects discussed are pasteurization and management, pond development, fitting livestock to the land, woodland management, and the leaving of field borders for wildlife.

The B. & O. has launched a Conservation Project in which the farmers residing in counties served by the railroad are eligible to compete. The railroad owns a multi-million bushel grain terminal at Baltimore and other elevators elsewhere.

It's the smile ye sing and the smile ye wear
That's making the sun shine everywhere.

—James W. Riley.



Weevil-Cide SPLITTERS

DAFFYNITION

Marriage: A process for finding out what sort of guy your wife would have preferred.

* * *

He: "Please?"

She: "No."

He: "Just this once?"

She: "No! I said."

He: "Aw, Heck, Ma! All the rest of the kids are going barefoot!"

* * *

WE'LL BITE

"Do you know what good clean fun is?"

"No. What good is it?"

* * *

SIMPLE, WASN'T IT?

The office beauty was telling the gals about her adventures on the previous night. "This fellow," she said, "took me up to his apartment and showed me a closet that contained at least fifteen divinely perfect mink coats. And what do ya know, he GAVE me one of them.

"And what did YOU have to do?" asked the skeptic in the crowd.

"Just shorten the sleeves," she said.

ON THE SAFE SIDE

Rastus was in trouble again, and the judge asked him if he were guilty or not guilty.

"Guilty, suh, Ah thinks, but A'd rather be tried'n make sure of it."

* * *

THE WITNESS SAID:

The county attorney demanded that a witness be explicit in describing a barroom shooting.

"Did you actually see this man shoot the victim?" the prosecutor asked.

"I saw the gun flash, heard the report and saw the man fall," replied the witness, and added somewhat apologetically, "but I can't say I saw the bullet travel."

* * *

WHY NOT?

He was undersized, meek and subdued, and he had applied for a job as night watchman.

"Well," said the boss, dubiously, "the fact is we want someone who is restless and uneasy, especially at night. Someone who sleeps with one eye open. Someone with remarkable hearing who starts at the slightest sound. We'd prefer a large, aggressive and even dangerous individual."

"All right," said the little man as he walked away, "I'll send the wife."

* * *

STAY DOWN TO EARTH

It's okay to tell a gal she has pretty ankles—but don't compliment her too highly.

STRANGLING CONFUSION

A feminine passenger had boarded the bus after the lights had gone out. A tall man standing near her asked if he could help her find a strap.

"Thank you," she replied, "but I have already found one."

"Then I wonder if you would mind letting go of my necktie."



CHILLING THOUGHT

Aunt: "You know, Tommy, every time I hear you say an ugly word it makes shivers run down my back."

Tommy: "Well, if you'd listen to Pop, you'd freeze to death."

* * *

STRATEGIST

Housewife: "Why should a big strong man like you be out begging?"

Hobo: "Well, lady, it's the only profession I know in which a gentleman can address a beautiful woman like you without an introduction."



THE

Weevil-Cide

THE DEPENDABLE GRAIN FUMIGANT

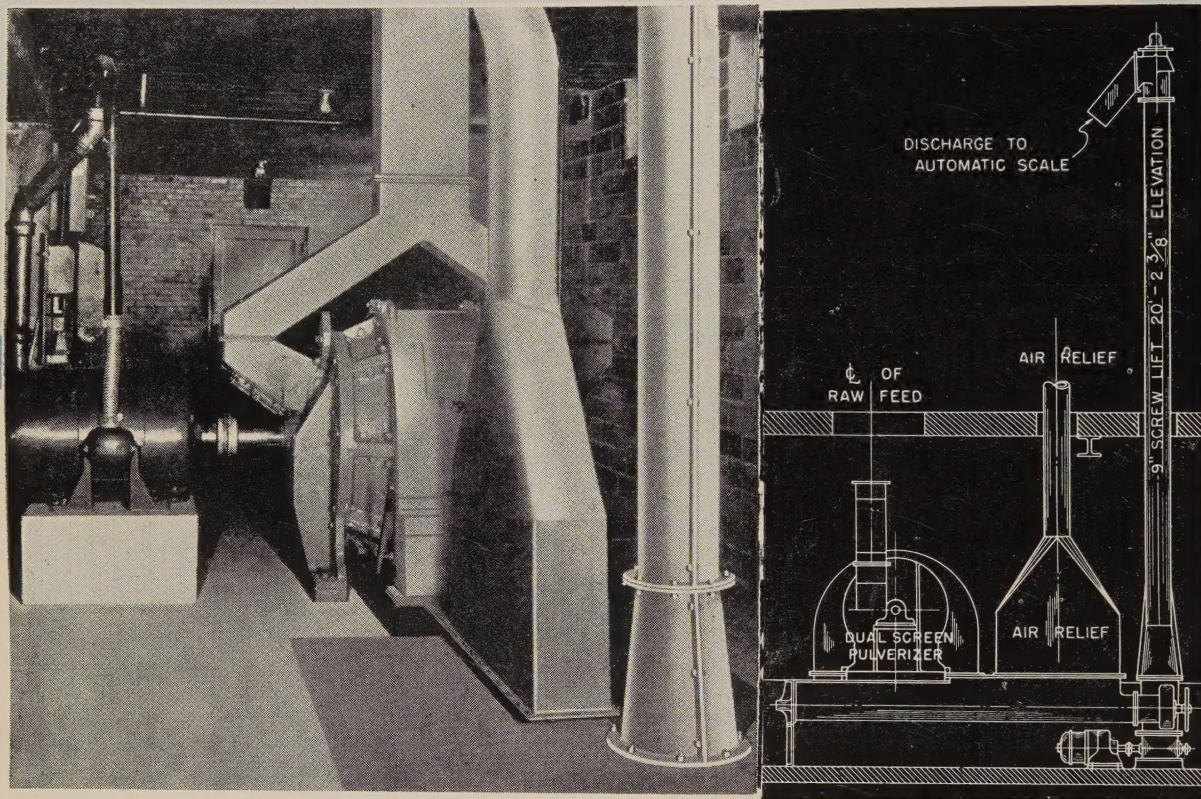
COMPANY

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PATENTED AND TRADE MARK REG. U. S. PAT. OFF.

*solved a difficult elevating problem
for Wisconsin Rendering Company, Appleton, Wis.*



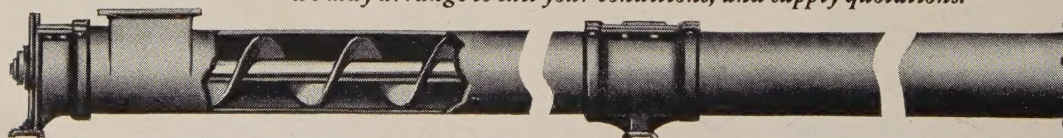
Type "C" 9-inch Screw-Lift Handling Meat Scrap and Tankage Material (8 to 10 tons per hour) from Prater Pulverizer Company's Dual Screen Pulverizer to Automatic Scale.

THE "HAMMOND" SCREW-LIFT elevates free-flowing bulk materials to any practical height. Its construction is patented, the result of many years of research to perfect a simple and efficient means of elevating materials that are difficult to handle.

There is no possibility of choking, no deflection, no noise. Everything is enclosed — Dust-tight — Moisture-proof — Safe — Sanitary — Compact — Accessible.

Standard units available for capacities of 75, 300, 1000 or 2500 cu. ft. per hour. Drives to suit conditions.

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